

TSVETKOV, M. V

26-58-4-42/45

AUTHOR: Sokolov, A.V., Candidate of Economic Sciences (Moscow)

TITLE: Original Work on the History of the Landscape (Original'nyy
trud po istorii landshafta)

PERIODICAL: Priroda, 1958, Nr 4, pp 119-120 (USSR)

ABSTRACT: This is a critical review of the book "The Change in the
Distribution of Forests in European Russia from the End of the
17th Century Until 1914", by M.V. Tsvetkov, which was published
in 1957 by the Academy of Sciences, USSR. The book deals with
the development of forestry in Russia before the Revolution,
giving a detailed account of the distribution of forests.

AVAILABLE: Library of Congress

Card 1/1 1. Forestry-Development-USSR

TSVETKOV, N.

Lumber transportation in self-unloading barges. Rech.transp.
14 no.2:7-10 F '55. (MLRA 8:5)

1. Inzhener Glavlesosplava.
(Lumber - Transportation)

TSVETKOV, N.

Improved bow of the "Minsk-50" electric saw. Mias.ind.SSSR 33 no.5:
51 '62. (MIRA 15:12)

1. Minskij opytno-eksperimental'nyy zavod "Prodmash".
(Meat industry—Equipment and supplies)

UKHATOV, V. (Kaliningrad); MARTYNOV, L.; GOLOVCHENKO, V.; BEZMENOV, V. (Komsomol'sk-na-Amure); GETMANENKO, V.; TSVETKOV, N. (g. Kalinin) Bezuglov, P.; BORODAVKIN, S. (Leningrad)

Readers' letters. Pozh. delo 7 no. 1:31-32 Ja '60.

(MIRA 14:2)

1. Zamestitel' predsedatelya soveta Dobrovol'nogo pozharnogo obshchestva, Rostov-na-Donu (for Martynov). 2. Rayonnyy pozharnyy ispektor, Kasimov, Ryazanskaya oblast' (for Golovchenko). 3. Starshiy master pozharno-ispytatel'noy stantsii, Novosibirsk (for Getmanenko).
(Fire prevention)

YEGOROV, N., kand.tekhn.nauk; TSVETKOV, N., inzh.

Landing stage superstructures made of lightweight reinforced concrete.
Rèch. transp. 19 no.11:26-28 N '60. (MIRA 13:11)
(Hydraulic structures)
(Reinforced concrete construction)

TSVETKOV, N., (Engr-Vice Adm)

Author of article, "Radiomen of the Navy," honoring Soviet Navy Day, 25 Jul 1954. After a brief recounting of the history of the Soviet Navy, the author mentioned some of the outstanding enlisted radio operators of the navy, told of their exploits and activities, and then paid tribute to the work of Dosaaf USSR in training radiomen. (Radio, Moscow, No 7, Jul 54)

SO: SUM No. 239, 13 Oct 1954

TSVETKOV, N., inzhener-vitse-admiral.

Navy radio operators. Radio no.7:8-9 Jl '54.
(Russia—Navy) (Radio operators)

(MLRA 7:7)

TSVETKOV, N.

USSR/ Miscellaneous - Radio operators

Card 1/1 : Pub. 89 - 5/29

Authors : Tsvetkov, N., Rear Admiral, Engineer

Title : Navy radio operators

Periodical : Radio 7, 8-9, July 1954

Abstract : This is a propaganda article, extolling the merits and fighting qualities of the Soviet Navy during the last war and praising the work of the presently operating signal-communication branch of the Navy, and its individual radio-specialists.

Institution : ...

Submitted : ...

TSVETKOV, N.,Engr-Vice Adam

TSVETKOV, N.-

Author of article, "Improve the Training of Naval Communications Personnel," on the importance, during an operation, of communications between all branches of arms. Cited is an incident of World War II, when, during a landing operation commanded by Officer KUZNETSOV, radio operators who landed with the first troops were able to direct effective fire on German positions. Also mentioned in the article is Officer SOLODOVNIKOV, who commands a unit in which there are several subunits of communications men. (Krasnaya Zvezda, 11 Dec 53)

SO: SUM 152, 25 June 1954

TSVETKOV, N.

"Telegraphists in the Navy."

So. Radio, Vol. 7, p. 5, 1952

NIKITINA, Ye.A.; TSVETKOV, N.A.

Viscosimetric study of the systems: isomeric α - and β -forms of
ammonium luteophosphorotungstates - water. Zhur.neorg.khim. 5
no.2:474-476 R '60. (MIRA 13:6)

1. Vtoroy moskovskiy meditsinskiy institut im. N.I.Pirogova.
(Ammonium phosphotungstate)

NIKITINA, Ye.A.; TSVETKOV, N.A.

Potentiometric titration of β -luteophosphotungstic acid.
Zhur. neorg. khim. 8 no.10:2285-2289 O '63. (MIRA 16:10)

1. 2-y Moskovskiy gosudarstvennyy meditsinskiy institut im. N.I.
Pirogova.
(Phosphotungstic acids) (Potentiometric analysis)

NIKITINA, Ye.A.; TSVETKOV, N.A.

Study of the system β -luteophosphotungstic acid - water by
solubility and viscosity methods. Zhur.neorg.khim. 5 no.6:
1304-1310 Je '60. (MIRA 13:7)

1. Vtoroy Moskovskiy meditsinskiy institut im. N.I.Pirogova.
(Phosphotungstic acid)

TSVETKOV, N. A.

Dissertation defended for the degree of Candidate of Chemical Sciences
at the Institute of General and Inorganic Chemistry imeni
N. S. Kurnakov in 1962:

"Investigation in the Field of Luteophosphate-tungstates, 2-Phosphate-
18-tungstates."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

NIKITINA, Ye.A.; TSVETKOV, N.A.

Study of the system hexa-substituted sodium β -luteophosphotungstate
- water by solubility and viscosity methods. Zhur.neorg.khim. 5
no.6:1311-1315 Je '60. (MIRA 13:7)

1. Vtoroy Moskovskiy meditsinskiy institut im. N.I.Pirogova.
(Phosphotungstic acid)

8/078/63/008/001/012/026
B117/B108

AUTHORS: Nikitina, Ye. A., Tsvetkov, N. A.

TITLE: Some properties of isomeric α - and β -ammonium luteo phosphotungstates

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 8, no. 1, 1963, 105-109

TEXT: It has been shown that the β -modification of ammonium luteo phosphotungstates (ALFT) is polymorphous, forming two crystal types of equal chemical composition $(\text{NH}_4)_6\text{H}_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9] \cdot 11\text{H}_2\text{O}$ and equal properties: β_1 -crystals are mainly formed by slow crystallization from a large

quantity of solution, their size being 2-3 cm. β_2 -crystals reach a size of 1-2 cm and tend to intergrowths. The α -form consists of only one crystal type. These crystals are small (1-2 mm) hexagonal prisms bounded by three pinacoids. They tend to intergrowths. Their color is associated with the easy reducibility of the α -form, and may be yellow to intensely blue depending on the conditions of production. The crystals of the β -form are less sensitive to reducing agents. Their color is bright yellow. An

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Some properties of isomeric ...

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analysis and comparison of IR absorption spectra showed that the two isomers of ALPT had a different structure of the internal coordination sphere which also differed from that of saturated phosphotungstates. The piezoelectric properties of the α - and β -forms are also different, and depend on the symmetry of their molecular structure: the α -form is not or little piezoactive; the less symmetric β -form, however, is highly piezoactive. The physicochemical properties of the ALPT isomers investigated are similar to those of cis-trans-isomers of other complex compounds. There are 3 figures and 2 tables. ✓

ASSOCIATION: Vtoroy moskovskiy meditsinskiy institut im. N. I. Pirogova
(Second Moscow Medical Institute imeni N. I. Pirogov)

SUBMITTED: February 6, 1962

Card 2/2

5(4)

SOV/78-4-4-21/44

AUTHORS: Nikitina, Ye. A., Tsvetkov, N. A.TITLE: The Equilibria in the Systems: Isomeric α and β Forms of Ammonium Luteophosphotungstate - Water (Ravnovesiya v sistemakh: Izomernyye α - i β -formy lyuteofosfornovol'framata ammoniya - voda)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 4, pp 839-844 (USSR)

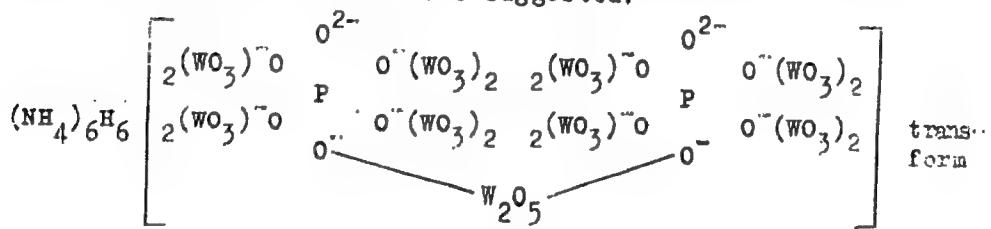
ABSTRACT: The authors investigated the equilibria in systems composed of the isomeric α and β forms of ammonium luteophosphotungstic acid and water. The solubilities of the α and β forms of this compound were investigated at 0-90°. The results are summarized in table 1 and figure 1. At 80 and 90° a completely irreversible conversion of the α form into the β form takes place. From 0 to 90° the β form of the ammonium luteophosphotungstate forms four crystal hydrates: $\text{H}_6(\text{NH}_4)_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9] \cdot 12\text{H}_2\text{O}$; $\text{H}_6(\text{NH}_4)_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9] \cdot 10\text{H}_2\text{O}$; $\text{H}_6(\text{NH}_4)_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9] \cdot 9\text{H}_2\text{O}$; $\text{H}_6(\text{NH}_4)_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9] \cdot 15\text{H}_2\text{O}$. The α form is converted

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SOV/78-4-4-21/44

The Equilibria in the Systems: Isomeric α and β Forms of Ammonium Luteophotungstate - Water

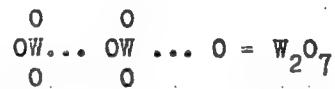
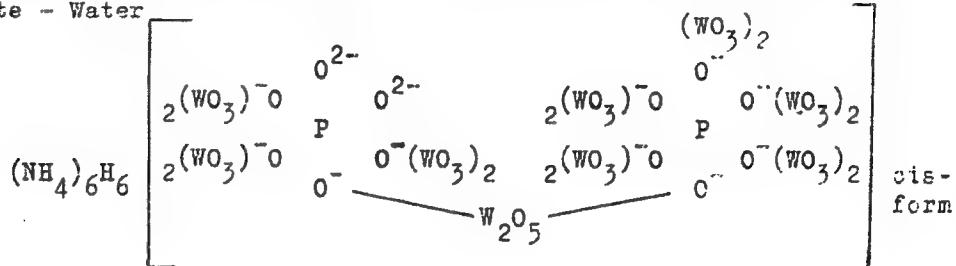
at $\sim 75^\circ$ to the β form (actually, to the hydrate which at this temperature corresponds to the β form). The α form is less soluble than the β form. The existence of both forms of ammonium luteophotungstate is explained in terms of geometric isomerism. For the isomers of this compound the following structural formulas are suggested:



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SOV/78-4-4-21/44

The Equilibria in the Systems: Isomeric α and β Forms of Ammonium Lates-
phosphotungstate - Water



There are 1 figure, 1 table, and 13 references, 6 of which
are Soviet.

ASSOCIATION: Vtoroy Moskovskiy meditsinskiy institut im. N. I. Pirogova
(Second Moscow Medical Institute imeni N. I. Pirogov)

Card 3/4

NIKITINA, Ye.A.; TSVETKOV, N.A.

Thermographic study of isomeric ammonium luteophosphotungstates
and β -luteophosphotungstic acid. Zhur.neorg.khim. 7 no.2:325-
332 F '62. (MIRA 15:3)

1. Vtoroy Moskovskiy meditsinskiy institut imeni Pirogova.
(AMMONIUM PHOSPHOTUNGSTATE)
(PHOSPHOTUNGSTIC ACID) (THERMAL ANALYSIS)

NIKITIN, Ye.A.; TSVETKOV, N.A.

Preparation of ammonium luteophosphotungstates (phospho- β -tungstates).
Zhur.neorg.khim. 3 no.12:2698-2706 D '58. (MIRA 12:1)

1. 2-y Moskovskiy meditsinskiy institut imeni N.I. Pirogova.
(Ammonium phosphotungstates)

NIKITINA, Ye.A.; TSVETKOV, N.A.

Equilibria in systems: isomeric - and -forms of ammonium
luteophosphotungstates - water. Zhur. neorg. khim. 4 no.4:839-844
(MIRA 12:5)
Ap '59.

1. Vtorey Moskovskiy meditsinskiy institut im. N.I. Pirogeva.
(Ammonium phosphotungstates)
(Phase rule and equilibrium)

AUTHORS: Nikitina, Ye. A. Tsvetkov, N. A., Sov/79-29-2-3/71
Konyshov, V. A.

TITLE: On Compounds of Luteo Phosphotungstic Acid With Urea and
Glycocol (O soyedineniyakh lyuteofosfornovol'framovoy kis-
loty s mochevinoy i glikokolem)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 357-364 (USSR)

ABSTRACT: The compounds of the above acid $H_{12}[P_2O_2(W_2O_7)_9] \cdot xH_2O$
(herein after called l.f.w.) with nitrogenous organic bases
are only sparsely discussed in publications. Rosenheim and
Jaenicke (Ref 1) synthesized the triple-substituted salt of
guanidine from the empirical formula $3(CN_3H_6)O \cdot P_2O_5 \cdot 18W_3O_3 \cdot 10H_2O$,
which was obtained in the form of yellow prisms. The action of
5 mol caustic soda and an excess of guanidine chloride upon
the free acid yielded a difficultly soluble guanidine salt,
which separated from the solution in the crystalline state as
a compound of the empirical formula $5(CN_3H_6)O \cdot P_2O_5 \cdot 18W_3O_3 \cdot 18H_2O$.
In this respect, the l.f.w. solution differs considerably from
the phosphotungstic acid of the saturated series
 $H_7[P(W_2O_7)_6] \cdot xH_2O$, which has been often described as a filler

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On Compounds of Luteo Phosphotungstic Acid With
Urea and Glycocol

SOV/79-29-2-3/71

of organic bases, amino acids and other compounds, and has been partially specified in the present paper (Ref 2). The purpose of the work under review was the synthesis of the compounds of the l.f.w. acid with urea and glycocol, which have hitherto been unknown. The analogous compound phosphotungstic acid is not easily soluble in water and separates if the urea concentration in the solution exceeds the 2 % limit (Ref 3). As is known, urea yields salts with strong acids upon the reaction with an equivalent of acid. Well-known are its difficultly soluble salts of the formula $\text{CO}(\text{NH}_2)_2 \cdot \text{HNO}_3 \cdot 2\text{CO}(\text{NH}_2)_2 \cdot \text{H}_2\text{C}_2\text{O}_4$ etc., which are decomposed by water (Ref 4) according to certain indications. Salts of the l.f.w. acid were thus synthesized with urea. On the basis of investigation results, these salts must be considered as products of the affiliation of urea to the l.f.w. acid. The crystalline salts of this acid were obtained with glycocol. On the basis of the acid properties of the compounds obtained, the salts of glycocol can be observed to form thanks to its alkaline properties. In the case of highly substituted salts

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On Compounds of Luteo Phosphotungstic Acid With
Urea and Glycocol

SOV/79-29-2-3/71

of glycocol, the glycocol molecules are partially polymerized on the expense of the hydrogen bonds. There are 9 figures, 5 tables, and 11 references, 5 of which are Soviet.

ASSOCIATION: 2-y Moskovskiy meditsinskiy institut (Moscow Second Medical Institute)

SUBMITTED: January 13, 1958

Card 3/3

TSVETKOV, N.A.; KONYSHEV, V.A.

Reaction of glycol with phosphomolybdic acid. Zhur. ob. khim.
26 no. 9:2555-2559 S '56. (MLRA 9:11)

1. 2-y Moskovskiy meditsinskiy institut.
(Glycine) (Phosphomolybdic acid)

AUTHORS:

Nikitina, Ye. A., Tsvetkov, N. A.

SOV/78-3-12-17/36

TITLE:

Concerning the Preparation of Luteophosphorous Tungstate
Ammonium (Phosphorous-9-Tungstate) (O poluchenii lyuteofos-
fornovol'framatov (fosforo-9-vol'framatov) ammoniya)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12,
pp 2698-2706 (USSR)

ABSTRACT:

The method of Wu and Souchay for preparing luteophosphorous tungstate ammonium was tested and improved. With the improved method the yield of α - and β -forms of luteophosphorous tungstate is 98%. The product of this method of preparation is free from Cl and H_3PO_4 impurities, and has the composition $(\text{NH}_4)_6\text{H}_6[\text{P}_2\text{O}_2(\text{W}_2\text{O}_7)_9]_x\text{H}_2\text{O}$. The disadvantage of both methods is their exceptionally slow crystallization process (by the method of Wu two weeks, by the method of Souchay two to three months). A fast method for preparing 88% α -form and 11.8% β -form of luteophosphorous tungstate ammonium was developed. For separating the α - and β -forms fractional crystallization was used. In the first fraction the α -form crystallizes with a greater degree of impurity from the β -form. In the second

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Concerning the Preparation of Luteophosphorous Tungstate Ammonium (Phosphorous-9-Tungstate) SOV/78-3-12-17/36

and third fraction the β -form precipitates. The α -form of the luteophosphorous tungstate ammonium is stable in the solid state as the hydrate with 9 molecules of water, while the β -form is a solid hydrate with 8 molecules of water. The α -form is irreversibly converted to the β -form in aqueous solution; an increase in temperature accelerates this process. The α - and β -forms crystallize out of the aqueous solution as the unstable hydrates with 15 and 11 molecules of water, respectively. The aqueous solutions of the α - and β -forms are inactive optically. There are 4 tables and 13 references, 3 of which are Soviet.

ASSOCIATION: 2-y Moskovskiy meditsinskiy institut im. N. I. Pirogova
(2nd Moscow Medical Institute imeni N. I. Pirogov)

SUBMITTED: October 23, 1957

Card 2/2

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

NIKITINA, Ye.A. ; TSVETKOV, N.A.

Some properties of the isomers of d_1 and d_2 ammonium luteophosphotungustates.
Zhur.neorg.khim. 8 no.1:105-109 Ja '63. (MIRA 16:5)

1. Vtory moskovskiy meditsinskiy institut imeni N.I.Pirogova.
(Ammonium compounds) (Phosphotungstates)

NIKITINA, Ye.A.; TSVETKOV, N.A.

Preparation of sodium β -luteophosphotungstate. Zhur.neorg.
khim. 10 no.12:2648-2652 D '65. (MIRA 19:1)

1. Vtoroy Moskovskiy meditsinskiy institut imeni Pirogova.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1

TSVETKOV, N. E.

Glanders 2., dop. i ispr. izd. Moskva, Sel'khozgiz, 1947. 259 p.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

TSVETKOV, N.E.

23543. SCSTCYeNIYE PRACTIVSTOLEMYaCh-MCGO DOKLJITATA U NCLCDYaYA,
NARODIVSHEGCSYA OT IMMUNIZIROVANNYKh MATCK. SPCRNIK NAUCH.
TRUDOV (LENINGR. VET. IN-T), VYP. 10, 1949, C.37-94

SC: LETOPIS NO. 31, 1949.

GOLOSOV, A.V.; SOKOLOV, I.I.; USPENSKAYA, A.N.; TSVETKOV, N.G.; SUMAROKOVA, M.Ya., redaktor; CHERNYAVSKIY, M.N., redaktor; LYUDKOVSKAYA, N.I., tekhnicheskiy redaktor.

[Textbook of the Latin language for secondary medical schools]
Uchebnik latinskogo iazyka dlia srednikh meditsinskikh uchebnykh zavedenii. Pod obshchei red. M.IA.Sumarokovoi. Moskva, Gos.izd-vo med.lit-ry, 1957. 157 p. (MIRA 10:11)
(Latin language)

TSVETKOVA, N.I., kand.tekhn.nauk, dotsent

Concerning Z.A.Khandov's book "Marine internal combustion engines."
Energomashinostroenie 9 no.9:31, 48 S '63. (MIRA 16:10)

MARTSINKONENE, E.I.; TSVETKOV, N.I.

Using vat dyes and indigosols for dyeing rayon crepe fabrics in
mechanical dye becks. Obm. tekhn. opyt. [MLP] no.9:20-25 '56.
(MIRA 11:10)

(Dyes and dyeing--Rayon)

TSVETKOV, N. I Dr.

Razvitiye Sovetskogo Lescaplava (Development of Soviet Timber-Rafting)

174 p. 1.00

SO: Four Continent Book List, April 1954

KUZNETSOV, Yu.A.; MAKAROV, A.A.; MELENT'YEV, L.A.; MERENKOV, A.P.; NEKRASOV, A.S.; TSVETKOV, N.I.; KUZNETSOV, Yu.A.; MAKAROVA, A.S.; KARPOV, V.G.; MANSUROV, Yu.V.; SYROV, Yu.P.; KHRILEV, L.S.; TSVETKOVA, L.A.; VOYTSEKHOVSKAYA, G.V.; YEFIMOV, N.T.; LEVENTAL', G.B.; KHANAYEV, V.A.; BEILYAYEV, L.S.; GAMN, A.Z.; KARTELEV, B.G.; KRUMM, L.A.; LIOPO, T.N.; SVIRKUNOV, N.N.; DRUZHININ, I.P.; KONOVALENKO, Z.P.; KHAM'YANOVA, N.V.; SHVARTSBERG, A.I.; NIKONOV, A.P.; STARIKOV, L.A.; POPYRIN, L.S.; PSHENICHNOV, N.N.; TROSHINA, G.M.; CHEL'TSOV, M.B.; SVETLOV, K.S.; SUMAROKOV, S.V.; TAKAYSHVILI, M.K.; TOLMACHEVA, N.I.; KHASILEV, V.Ya.; KOSHELEV, A.A.; KUDINOVA, L.I., red.

[Methods for using electronic computers in the optimization of power engineering calculations] Metody primeneniia elektronno-vychislitel'nykh mashin pri optimizatsii energeticheskikh raschetov. Moskva, Nauka, 1964. 318 p.

(MIRA 17:11)

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Energeticheskiy institut. 2. Chlen-korrespondent AN SSSR (for Melent'yev).

TSVETKOVA, N. K.

Physical Chemistry

Dissertation: "Investigation of Physicochemical Analysis of the Reaction of Cyclic Secondary and Tertiary Amins With Acids and Aromatic Nitro Compounds." Cand Chem Sci, Rostov State U, Rostov-on-Don, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 3, Feb 54)

SO: SUM 213, 20 Sept 1954

PAGE 1 BOOK EXPIRATION Sov/233

Moscow. Vyssheye tekhnicheskoye uchilishche

Raschetnye dalyay i mehanizmy tochnykh priborov; sbornik statey

(Design of Parts and Mechanisms of Precision Instruments; Collection of Articles) Moscow, Mashiz, 1960. 260 p.

Ed. (Title page): T. A. Gavrydyan, Doctor of Technical Sciences,

Professor; Ed. (Inside book): Ya. O. Alaverdov, Engineer;

Techn. Ed. A. P. Dravos; Managing Ed. for Literature on

Mechanics, Building and Instrument Making (peashch); M. V.

Pokrovskiy, Engineer.

PURPOSE. This collection of articles is intended for scientific

workers and engineers engaged in instrument making.

CONTENTS: The results of investigations on making instruments

with complex and design-perfected parts, parts, and mechanisms,

etc. are claimed, are published here for the first time. The

articles cover theory and methods of practical design,

engineering, a new method of manufacturing toothed wheels with

alternating ratio within one revolution, universal method for

designing an oscillating system for stabilizing by means of com-

plex variables and precision method for designing a brake

centrifugal governor. In instrument design, some of the

articles are accompanied by Soviet and non-Soviet references.

No personnel are mentioned.

Danayev, I. P. Candidate of Technical Sciences, Docent.

Design of a Free Oscillating System "Balance Arm-Strip

Spring." Allowing for the Constant Angular Velocity of the

Motion of the Spring. The exact as well as an approximate analytical method

50

For the above design are presented.

Torsov, A. M. Candidate of Technical Sciences, Docent. Theory

and Practical Methods of Balancing the "Balance Wheel-Spiral

Spring" Oscillating System in Timepieces. 82

A development of the problems concerning the effect of the

unbalance of the oscillating system on the running of a

clockwork is presented.

106

Tsvetkov, N. M., Engineer. Design of Centrifugal Governors

The problems of methodology used for the perfected design

of the brake centrifugal governors in instruments

are discussed. The motion of the governed me-

chanisms is investigated (including the governor and mover),

by taking into account inertial and frictional losses in

the whole mechanism. Sample calculations using simplified

design formulas are presented.

106

Valedintsev, A. S., Candidate of Technical Sciences, Docent.

Design, Theory, and Mechanisms in Measuring Instruments

171

Spring links are crossed cantilever strip-spring mea-

sureng links in small angular movements. Various de-

signs of spring suspensions are given and the problems of

compensating the drop in the forces during measuring in

instruments with spring mechanisms are discussed.

171

Chernikov, V. N., Candidate of Technical Sciences. The Re-

versing Permanent Powder Clutch. 198

The theory and design of the above clutch are presented.

198

Card 4/6

TSVETKOV, N.N.

Expanding the system of public health institutions in Moscow.
Gor.khoz.Mosk. 36 no.11:9-11 N '62. (MIRA 15:12)

1. Zamestitel' zaveduyushchego Gorodskim otdelom zdravookhraneniya,
Moskva.
(Moscow—Hospitals)

TSVETKOV, N.M.

Graphico-analytical method of the determination of wire
speed and acceleration during winding. Izv. vys. ucheb.
zav.; prib. 8 no.3:134-137 '65. (MIRA 18:11)

1. Moskovskiy aviatcionnyy institut.

TSVETKOV, N. M.

"Investigation of the Technological Process for Manufacturing the Windings of Aircraft Electric Instruments." Sub 25 Jun 51, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

and. 1951
Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

172-1 ALV, N. M.

Category: USSR / Physical Chemistry - Crystals

B-5

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29767

Author : Bogoroditskiy N. P., Fridberg I. D., Tsvetkov N. M.

Inst : not given

Title : Anomalous Polarization in Polycrystalline Titanium Dioxide

Orig Pub: Zh. tekhn. fiziki, 1956, 26, No 9, 1890-1901

Abstract: Dielectric constant ϵ and tangent of losses $\operatorname{tg} \delta$ were determined for pure TiO_2 (I) and I with additions of oxides. The purer the I the lower are ϵ and $\operatorname{tg} \delta$. Anomalously large ϵ and $\operatorname{tg} \delta$ are found in specimens of I containing Nb_2O_5 or CaO . Addition of Al_2O_3 , Fe_2O_3 and ZrO_2 produce no anomaly. X-ray diffraction study showed formation of a solid solution only in the case of an addition of Nb_2O_5 . It is shown that anomalous polarization of I is due to partial reduction of I in the presence of Nb_2O_5 or CaO .

Card : 1/1

-45-

"APPROVED FOR RELEASE: 04/03/2001

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APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

18618-4, 18-171.

SUBJECT USSR / PHYSICS CARD 1 / 3 PA - 1381
AUTHOR BOGORODIZKIJ, N.P., FRIEDBERG, I.D., ZWETKOW, N.M.
TITLE On the Problem of Anomalous Polarization in the Polycrystalline Peroxide of Titanium.
PERIODICAL Zurn.techn.fis, 26, fasc. 9, 1890-1901 (1956)
Issued: 10 / 1956 reviewed: 10 / 1956

In connection with contradictions found in literature the authors investigated the influence exercised by admixtures of oxides of the metal groups II., III., and V. on the electric properties of polycrystalline peroxide of titanium. Chemically pure reagents were used as additions of foreign oxides. The samples were mixed in an agate mortar with distilled water, after which they were dried and pressed. The thickness was 1,0 to 1,5 mm. Burning was carried out in electric silican carbide ovens at 1200 to 1450° C in platinum vats. Burnt-in silver layers served as electrodes. The degree of purity was controlled by spectral analysis and structure was controlled by X-ray analysis. One of the basic problems is that of the characteristic of the spectrally pure peroxide of titanium with a permitted low content of admixtures. A table contains the data on the dielectric constant and the $\tan \delta$ for various frequencies at room temperature as well as for a specific space resistance at 100° C of the titanium peroxide of various brands. A curve represents the dependence of ϵ and $\tan \delta$ on temperature. The same was done by further curves for titanium peroxide with various admixtures. These curves show that titanium peroxide with admixtures of Nb_2O_5 and CaO has anomalous electric properties. Additions of Al_2O_3 , Fe_2O_3 and ZrO_2 remove these anomalies.

Zurn.techn.fis, 26, fasc.9, 1890-1901 (1956) CARD 2 / 3

PA - 1381

Summary:

- 1.) Specially purified (spectrally pure) titanium peroxide is characterized by important electric properties within a wide temperature- and frequency range, and possesses no anomalous electric properties.
- 2.) An anomalous polarization in TiO_2 is found in the cases of additions of CaO and Nb_2O_5 , which is connected with the process of partly recomposing the TiO_2 in the presence of these oxides.
- 3.) An anomalous polarization occurs also in pure titanium peroxide which has no foreign admixtures, namely if it is treated thermally until it attains a light blue color in a reducing atmosphere.
- 4.) The additions of Al_2O_3 and Fe_2O_3 to titanium peroxide, providing the latter contains Nb_2O_5 or CaO , lead to a considerably lower restoration of TiO_2 because of the compensating effect of the trivalent oxides. In this case no anomalous polarization is observed.
- 5.) An anomaly of the electric properties of titanium peroxide with admixtures is observed in the case of technical and acoustic frequencies. Within the range of radio frequencies the $tg\delta$ does not increase but is reduced in the case of all compounds.
- 6.) A carefully carried out X-ray structural analysis of titanium peroxide with admixtures of foreign oxides (CaO , BaO) produced no loosening of the crystalline rutile lattice.

Zurn.techn.fis, 26, fasc.9, 1890-1901 (1956) CARD 3 / 3

PA - 1381

7.) It has been proved by experiment that within the range of sufficiently large concentrations of Fe_2O_3 , Nb_2O_5 and Al_2O_3 additions the presence of a phase - that of rutile - becomes noticeable. The solid solution occurs distinctly in addition of Nb_2O_5 .

8.) If the low frequencies, at which the anomalous processes of polarization in titanium peroxide with admixtures have been observed, are taken into account together with the conductivity of the anomalous TiO_2 , it may be assumed that the most probable mechanism of dielectric losses is the electron-relaxation mechanism.

INSTITUTION:

AM4016086

BOOK EXPLOITATION

s/

Gavrilov, A. N.; Ushakov, N. N.; Tsvetkov, N. M.

Technology of Aviation Electrical Equipment (Tekhnologiya aviationskogo elektro-
oborudovaniya), Moscow, Oborongiz, 1963, 523 p., illus., bibliog. Errata slip
inserted. 10,000 copies printed.

TOPIC TAGS: electrical equipment, casting, cold stamping, hot stamping, plastic,
ultrasonic treatment, machining, coating, bushing, gear, threaded part, spring,
housing, permanent magnet, winding, rotor, assembly, automation

PURPOSE AND COVERAGE: The book presents the basic problems of designing the technological processes applicable to aviation electrical equipment construction, the technology of fabricating standard and special components, problems of assembly, mounting, and inspection of aircraft electrical equipment. It reflects the experience of domestic and foreign electrical equipment construction and the results of certain research. Great attention is given to raising the quality and lowering the cost of making components by using progressive technological processes, mechanization and automation. The book is a text for students in aviation higher educational institutions and departments and can be useful for workers in industry.

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SUB CODE: EE, ML

SUBMITTED: 12 Jul 63

NR REF Sov: 127

OTHER: 000

DATE ACQ: 20 Mar 64

Card 4/4

TSVETKOV, N. N.

AUTHOR: Tsvetkov, N. N. 119-1-5/13

TITLE: Calculating the Centrifugal Regulators for Velocity Control
(Raschet tormoznykh tsentrobeznykh regulyatorov skorosti
priborov)

PERIODICAL: Priborostroyeniye, 1958, Nr 1, pp. 13-17 (USSR)

ABSTRACT: A more exact method is deduced theoretically in order to be able to calculate the projected centrifugal regulators for velocity control. The motion of the regulating mechanism is regarded on the condition that the regulator and the motor mechanism operate simultaneously together. Besides, the changes of the moments of moving forces, the changes of the moments of inertia with increasing speed of the axes, the inertia of the mechanisms as well as the friction losses in the mechanisms are taken into account.
As initial data for the calculation of the regulator the nominal number of revolutions, the load factor of the rotating axis, the operation time as well as the character of the changes of the moments of forces are used.
The advantage of this work is to be seen in the fact that the formulae deduced could be largely simplified on

Card 1/2

Calculating the Centrifugal Regulators for Velocity Control 119-1-5/13

certain conditions and that their use becomes much easier.

A comparison between the regulators calculated by means of the method mentioned and the values measured experimentally did not show great differences. There are 7 figures and 3 references, all of which are Slavic.

AVAILABLE: Library of Congress

1. Regulators-Application

Card 2/2

TSvetkov, N.N.
TSVETKOV, N.N.

Designing centrifugal braking speed controllers. Priborostroenie
no.1:13-17 Ja '58. (MIRA 11:2)
(Automatic control)

TSVETKOV, N. N., KROZER, S. P., TERENT'YEVA, L. S.

TSVETKOV, V. N., KROZER, S. P., TERENT'YEVA, L. S.

Polymers and Polymerization.

Effect of concentration on the rate of diffusion of some polymers in a solution. Dokl. AN SSSR 85. No. 2, 1952.

9. Monthly List of Russian Accessions, Library of Congress, November 1952 ~~1953~~, Uncl.

TSVETKOV, N. P., Cand Tech Sci -- (diss) "Research into light ship-building concrete types." Gor'kiy, State Inst of Water Transport Engineers, 1960. 19 pp with graphs; 200 copies; price not given; (KL, 18-60, 153)

FLORINSKAYA, Z.A., dots., kand. fiz.-matem. nauk; TSVETKOV,
N.P., red.

[Hydrostatic equations in engineering problems; a practical
manual for students in mechanics and operations courses]
Uravneniya gidrostatiki v tekhnicheskikh zadachakh; uchebno-
metodicheskoe posobie dlia studentov mekhanicheskoi i eks-
pluatatsionnoi spetsial'noslei. Gor'kii, Gor'kovskii in-t
inzhenerov vodnogo transp., 1963. 49 p. (MIRA 17:9)

"Conditions for the Electrodeposition of the Alloy Mn-Ni." D. N. Gritsan and N. S. Tyrykkg (Zhur. Priklad. Khim., 1948, 22, (6), 600-604). [In Russian]. Preliminary experiments established that unless NH_4^+ ions are present it is impossible to obtain satisfactory Mn-Ni deposits. A bath containing Mn, Ni, and NH_4^+ sulphate was therefore used, with a brass (in some experiments, Cu or Fe) cathode (working area 35 cm^2) and two graphite anodes, the bath temp. being 20° C. After electrolysis the cathode was washed, dried, and the deposit dissolved in a mixture of H_2SO_4 (1 : 20) 320, HNO_3 (1 : 4) 100, H_3PO_4 (21%) 50 ml. Mn was determined in this soln. by a persulphate/nitrite method; the Ni content of the deposit was calculated by difference. With bath concn. $\text{MnSO}_4 \cdot 5\text{H}_2\text{O}$ 50-300, $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$ 40, $(\text{NH}_4)_2\text{SO}_4$ 75 g./l., and cathodic c.d. (D_c) = 2.8 amp./dm.², the Mn content of the deposit rose sharply to ~7% at 150 g./l. $\text{MnSO}_4 \cdot 5\text{H}_2\text{O}$, but remained const. at higher MnSO_4 concentrations; the coatings were mirror-bright and possessed high chem. stability. With $\text{MnSO}_4 \cdot 5\text{H}_2\text{O}$ 150, $\text{NiSO}_4 \cdot 7\text{H}_2\text{O}$ 10 g./l., and D_c = 2.8 amp./dm.², the Mn content of the deposit fell from 15 to 9% as the $(\text{NH}_4)_2\text{SO}_4$ compn. of the bath rose from 20 to 75 g./l., the quality of the deposit being best at 60-75 g./l. Variation in D_c from 2.7 to 17.0 amp./dm.² with this type of bath had little effect on the Mn content of

the deposits, which were dense and bright; above 17.0 amp./dm.² the deposits were dark. A five-fold lowering of the Ni concentration in the bath resulted in only a 2% increase in the Mn content of the deposit. Further experiments were made using a diaphragm cell, the catholyte contg. $MnSO_4$, CH_3CO_2H , 150, $(NH_4)_2SO_4$, 75 g./l., and the anolyte contg. $NiSO_4$, $(NH_4)_2SO_4$, CH_3CO_2H saturated, $(NH_4)_2SO_4$, 75 g./l. For each value of D_{Ni} there is a definite catholyte pH at which there is a sudden jump in the Mn content of the deposit; with an increase in D_{Ni} , the jump in the % Mn/pH curve shifts into the more acid region. Thus at 3.4 amp./dm.², there is a jump from 15 to 67% Mn at a catholyte pH = 8; at 10.8 amp./dm.², from 32 to 98% Mn at a pH = ~5. This rise is accompanied by a rise in the cathodic potential (ϕ)/pH curve. Deposits with <35% Mn were only slightly less resistant to corrosion than those of Ni; deposits with >35% Mn quickly lost their lustre, but were more resistant than those of pure electrolytic Mn. Treatment of Mn-rich deposits with 8% $K_2Cr_2O_7$ soln. preserved their lustre and increased their corrosion-resistance.—G. V. E. T.

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

TSVETKOV, N.S., aspirant; YURZHENKO, A.I., professor.

Effect of promoter concentration on the speed of polymerization
of styrene in an emulsion. Dop.ta pov.L'viv.un. no.3 pt.2:33-34
'52. (MLRA 9:11)

(Styrene) (Polymers and polymerization)

TSVETKOV, N. S.

USSR/Chemistry - Cadmium

Aug 52

"Periodic Phenomena During the Electrodeposition of Cadmium in the Presence of Impurities," D. N. Gritsan and N. S. Tsvetkov, "Khar'kov State U

Zhur Fiz Khim, Vol 26, No 8, pp 1110-1116

During the electrodeposition of Cd from simple salt solns contg dextrin or some other org colloidal and surface-active substance, a spontaneous periodic change in the cathode potential takes place, accompanied by changes in the strength of the circuit's current and the structure of the deposit. When spontaneous periodic oscillation of the cathode

263T5

potential takes place, there is a reduction of Cd ions at 2 greatly differing cathode potentials corresponding to 2 sharply different conditions of the cathode surface. A dense, lustrous Cd deposit forms at less negative potentials, whereas a loose, dark deposit forms at more negative potentials. The periodic oscillation of the cathode potential, and the whole aggregate of influences associated with it, takes place at a specific cd. It is surmised that the periodic, spontaneous oscillations of potential are caused by adsorption of impurities forming a dense adsorption film on the surface of the cathode. The film then periodically desorbs at sufficiently negative electrode potentials.

263T5

TSVETKOV, N. S.

USSR/Chemistry - Polymerization
Peroxides

Aug 52

"The Effect of the Concentration of the Initiator
on the Rate of Polymerization in Emulsions," A. I.
Yurzhenko and N. S. Tsvetkov, L'vov State U

"DAN SSSR" Vol 85, No 5, pp 1099-1102

The effect of the concn of org and inorg peroxides
on the rate of polymerization of styrene in emul-
sions at various pH of water and concn of emulsi-
fier. The initiators used were potassium persul-
fate, sodium perborate, hydrogen peroxide, and
dimethylphenylcarbinol hydrogen peroxide. With

239729

the peroxide type of initiator, the polymeri-
zation rate first increases with increased concn
of initiator, but then slows down. This is
shown graphically by a max on the curve. Lower-
ing the pH results in shifting the max to the
side of increased concn of initiator. Submitted
by Acad P. A. Rebinder 4 Jun 52.

239729

TSVETKOV, N. S.

Dissertation: "Research Into the Kinetics of the Polymerization of Unsaturated Hydrocarbons in Emulsions." Cand Chem Sci, L'vov State U, L'vov 1953.

W-30928

SO: Referativnyy Zhurnal, No. 5, Dec 1953, Moscow, AN USSR (N 30928)

TSVETKOV, N.S.

Combined effect of promoter and emulsifier on the rate of polymerization in emulsion. A. I. Yurzhenko and N. S. Tsvetkov. Soobshcheniya Nauch. Rabotakh Vsesoyuznogo Konserviruyushchego i na Mendeleva 1953, No. 1, 24-33;

Refer. Zhur., Khim. 1954, No. 12574; cf. C.A. 47, 7819c.

A formula is derived for the rate (v) of polymerization in an emulsion. The 3 variations of it are: $v = (k'/\sqrt{k_3})\sqrt{m}\sqrt{k_1}R_g^2 - \alpha k_1R_g^2$, $v = (k'/\sqrt{k_3})\sqrt{m}\sqrt{(1 + \alpha)k_1k_{3m}} - \alpha k_1k_{3m}$, and $v = (k'/\sqrt{k_3})\sqrt{m}\sqrt{k_{3m}} - (1 + \alpha)k_1R_g^2$, where k' , k_1 , k_3 , and k_{3m} are the const. of the rate of reaction of growth, decompn. of promoter, break in the aq. phase, and bimol. break in the monomeric-polymeric particles, resp.; k_3 is the const. of the rate of penetration of radicals into the micelles of the emulsifier or emulsion droplets; m is the concn. of micelles; R_g is concn. of free radicals in the aq. soln.; α is concn. of promoter; α is the fraction of the inhibitor entering into reaction with the active chains of the polymer. Analysis of these equations shows: (1) there is a certain optimum concn. of the promoter at which v has the max. value; (2) as the value of the const. of the rate of promoter decompn. increases, the max. on the curve v vs. c_{in} shifts toward smaller concns. of the promoter; (3) at high concns. of the emulsifier the rates of polymerization are detd. by the rate of free-radical formation in the aq. phase of the emulsion; and (4) the higher the micellar wt. of the emulsifier, the greater is the rate of polymerization, everything else being equal.

M. Hoseh

"APPROVED FOR RELEASE: 04/03/2001

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APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

TSVETKOV, N.S.; YURZHENKO, A.I.

Concentration of the emulsifier as a kinetic factor during polymerization
in emulsions. Koll.zhur. 15 no.4:308-315 '53. (MLRA 6:8)

1. L'vovskiy gosudarstvennyy universitet imeni I.Franko. Kafedra fiziche-
skoy i kolloidnoy khimii. (Polymers and polymerization) (Emulsions)

TSVETKOV, N. S.

✓ Combined effect of emulsifier and initiator on the rate of polymerisation in emulsions. A. I. Yurzhenko and N. S. Tsvetkov (Dokl. Akad. Nauk. SSSR, 1953, 90, 421-424). In the emulsion polymerisation of styrene, the limiting rate of polymerisation (I) and the concn. of emulsifier at which it is attained, decreases with the concn. of $K_2S_2O_8$ initiator; I also increases with decrease in the micellar weight of the emulsifier. The mol. wt. of the polymer increases with the emulsifier concn. R. C. MURRAY.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1

7
~~Effect of inorganic salts on the polymerization of styrene in the presence of~~

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CIA-RDP86-00513R001757220006-1"

Tsvetkov, N. S.

USSR/Chemistry of High Molecular Substances.

F

Abs Jour. : Referat Zhurnal Khimiya, No 6, 1957, 19442.

Author : N.S. Tsvetkov, A.I. Yurzhenko.

Inst :

Title : Influence of Inorganic Salts on Process of Polymerization of Styrene in Emulsion.

Orig Pub : Kolloid, Zh., 1956, 18, No 3, 362-368.

Abstract : The influence of Na_2SO_4 and KCl (in quantities of up to 0.1 - 0.02 g-equ/l) on the speed of the emulsion polymerization of styrene in presence of initiators - $\text{K}_2\text{S}_2\text{O}_8$, dimethylphenylcarbinol hydroperoxide (I) and benzoyl peroxide (II) - and of the emulsifier salt-less Nekal, as well as their influence on the molecular weight of the polymers were studied by the dilatometric and viscosimetric methods. The polymerization speed curves in presence of $\text{K}_2\text{S}_2\text{O}_8$ and I depending on the concentration of salts possess a maximum (at 0.02 - 0.03 g-equ/l) that is the sharper the higher the con-

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USSR/Chemistry of High Molecular Substances.

F

Abs Jour : Referat. Zhurnal Khimiya, No 6, 1957, 19442.

centration of the initiator and Ph of the aqueous phase are. The authcrs explain the discovered phenomena by the influence of salts on the colloidal solubility of the monomere. In presence of II, the salts do not influence the polymerization speed within the limits of the studied concentrations. The molecular weight curve of polystyrene depending on the salt content in the polymerized mixture also passes through a maximum corresponding to the salt concentration of 0.01 - 0.04 g-equ/l.

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illions (in billions of dollars) for the years 2000 through 2004.

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CIA-RDP86-00513R001757220006-1

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1"

TSVETKOV, N.S.; MARKOVSKAYA, R.F.

High degree of polymerization of styrene and methyl methacrylate
in the presence of polymeric peroxides. Vysokom. soed. 7 no.1:169-
174 Ja '65. (MIRA 18:5)

1. L'vovskiy gosudarstvennyy universitet imeni Franko.

TSVETKOV, N.S.; BELETSKAYA, Ye.S.

Mechanism and kinetics of styrene polymerization in the
presence of polymeric peroxide of pimelic acid. Ukr. khim.
zhur. 31 no.4:387-392 '65. (MIRA 18:5)

1. L'vovskiy gosudarstvennyy universitet imeni Ivana Franko.

TSVETKOV, N.S.; MARKOVSKAYA, R.F.

Use of the polymeric peroxide of sebamic acid in the synthesis
of polystyrene and block copolymers. Vysokom. soed. 6 no.11:
2051-2056 N '64 (MIRA 18:2)

1. L'vovskiy gosudarstvennyy universitet imeni Ivana Franko.

TSVETKOV, N.S.

Core breakers of new construction. Razved. 1 obj. no. 30
no. 2:52 F '64. (MIRA 17:8)

1. Starobinskaya geologorazvedochnaya partiya.

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001757220006-1

SOV(RCP). Ukrainskiy khimicheskiy zhurnal. v. 31. no. 3. 1990. vol. 26

APPROVED FOR RELEASE: 04/03/2001

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ACCESSION NO. A175722

leads to a rapid consumption of the initiator and hence to a considerable slowing down of the

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U. S. DEPARTMENT OF JUSTICE

NO REF. NO. 063

011111

TSVETKOV, N.S.; BELETSKAYA, Ye.S.

Kinetics of mass polymerization of styrene under the effect of
polymeric peroxide of azelaic acid. Ukr.khim.zhur. 29 no.12:
1289-1294 '63. (MIRA 17:2)

1. L'vovskiy gosudarstvenny universitet im. Ivana Franko.

TSVETKOV, N.S.; BELETSKAYA, Ye.S.

Polymeric peroxides of dibasic organic acids. Ukr. khim.
zhur. 29 no.10:1072-1075 '63. (MIRA 17:1)

1. L'vovskiy gosudarstvennyy universitet im. Ivana Franko.

TSVETKOV, N.S.; GLOTOVA, Z.F.

Effect of the electrolyte phase composition on electrochemical polymerization. Vysokom. soed. 5 no. 7:997-1001 Jl '63.

(MIRA 16:9)

I. Lvovskiy ordena Lenina gosudarstvennyy universitet imeni Ivana Franko.

(Unsaturated compounds) (Polymerization) (Electrolysis)

TSVETKOV, N.S.; FAGARASH, M.B.

Polymerization of styrene induced by polymeric adipinyl peroxide.
Vysokom. soed. 5 no.7:1002-1007 J1 '63. (MIRA 16:9)

1. L'vovskiy ordena Lenina gosudarstvennyy universitet imeni
Ivana Franko.
(Styrene) (Polymerization)

L 14949-63

EWP(j)/EPF(c)/EWT(m)/RDF 4.52 F-14/P-14 RM/AM

1963-1964, 1965-1966

S/CI20, 61/X/51 1002/2007

AUTHORS: Tsvetkov, N. S.; Fagarash, M. B.

TITLE: Polymerization of styrene induced by polymeric adipinyl peroxide

SOURCE: Vy*okosokolikulyarny*ye soyedineniya, v. 5, no. 7, 1963, 1002-1007

TOPIC TAGS: styrene, polymerization, adipinyl peroxide, initiator, peroxide

ABSTRACT: Adipinyl peroxide was selected as an initiator in the radical polymerization of styrene because of favorable results obtained with other polymeric peroxides of aliphatic dicarboxylic acids. The synthesis of polymeric adipinyl peroxide yielded a light white powder (insoluble in the usual organic solvents and in water) which possessed explosive properties. The thermal decomposition of a 1% adipinyl peroxide solution in benzene was conducted in sealed ampules at 65, 70, and 75°C for periods up to 10 hours, and the amounts of undecomposed peroxide determined at various intervals. The results showed that the decomposition of peroxide proceeded at a linear rate. The results of kinetic measurements of the styrene polymerization process in the presence of 0.1-0.8% adipinyl peroxide for periods up to 10 hours indicate an increased polymerization rate with time and concentration of the initiator, the reaction proceeding at a linear rate in respect to the square root

Card 1/2

65
64

L 14949-63
ACCESSION NR: AP3003789

of the initiator's concentration. It was calculated that within the 65-75°C temperature interval the effective (summary) energy of summary styrene activation amounted to 28.1 ± 1.2 kcal/mol. Orig. art. has: 5 charts and 1 table.

ASSOCIATION: L'vovskiy ordena Lenina gosudarstvennyy universitet im. Ivana Franko (L'vov State University)

SUBMITTED: 11Dec61

DATE ACQ: 08Aug63

ENCL: 00

SUB CODE: CH

NO REF SOV: 001

OTHER: 004

Card 2/2

TSVETKOV, N.S.

Polymerization kinetics of styrene in the presence of phthaloyl peroxide. Vysokom.socd. 3 no.3:408-413 Mr '61. (MIRA 14:6)

1. Lvovskiy gosudarstvennyy universitet imeni Ivana Franko.
(Styrene) (Polymerization) (Phthaloyl peroxide)

TSVETKOV, N.S.

Polymerization of methyl methacrylate under the influence of cathodic hydrogen. Vysokom. soed. 3 no.4:549-554 Ap '61. (MIRA 14:4)

1. L'vovskiy gosudarstvennyy universitet imeni I. Franko.
(Methacrylic acid) (Polymerization)

S/190/61/003/003/005/014
B101/B204

AUTHOR: Tsvetkov, N. S.

TITLE: The kinetics of styrene polymerization in the presence of phthaloyl peroxide

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 3, 1961,
408-413

TEXT: The present paper is to explain the kinetics of styrene polymerization initiated by a polymeric peroxide (phthaloyl peroxide) which forms biradicals during its thermal disintegration. The paper is based on studies made by H. Y. Shah, F. Leonard, A. V. Tobolsky (Ref. 2: J. Polymer Sci., 7, 537, 1951) and B. Zimm, J. Bragg (Ref. 5: J. Polymer Sci., 9, 476, 1952). Polymerization of the purified styrene was brought about in glass dilatometers with magnetic stirrer by means of phthaloyl peroxide synthetized from phthalchloride and sodium peroxide. The results are presented in Fig. 1. Although phthaloyl peroxide is insoluble in styrene, a linear dependence of the polymerization rate on the square root of the peroxide concentration was found (Fig. 2). The author assumes

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formation of radicals from the thermal decomposition of phthaloyl peroxide, that initiate the reaction. The decomposition is proportional to the peroxide concentration, but is no linear function of time since in the beginning a large number of weak bonds rupture rapidly while the rupture of stronger bonds occurs later and more slowly. This explains the gradual slowing down of polymerization. The total activation energy was found to be 18.1 ± 0.5 kcal/mole. The activation energy of initiation was 23.2 kcal/mole and thus by 6.4 kcal/mole less than that of benzoyl peroxide. The slower polymerization by means of phthaloyl peroxide is due to its insolubility. Table 2 gives the intrinsic viscosity of polystyrene at various peroxide concentrations. The decrease in intrinsic viscosity at higher peroxide concentrations is explained by an accelerated radical formation which leads to a higher yield of the polymer, but with lower molecular weight. The polymerization was found to proceed also after the solid phase had vanished. The author supposes formation of peroxide radicals from fractures of the polymeric phthaloyl peroxide. Since heating the polymer for some time (3 hr at 100°C) leads to an only slight decrease in intrinsic viscosity, the author assumes a thermal decomposition of some few peroxide radicals that are constituents of polystyrene.

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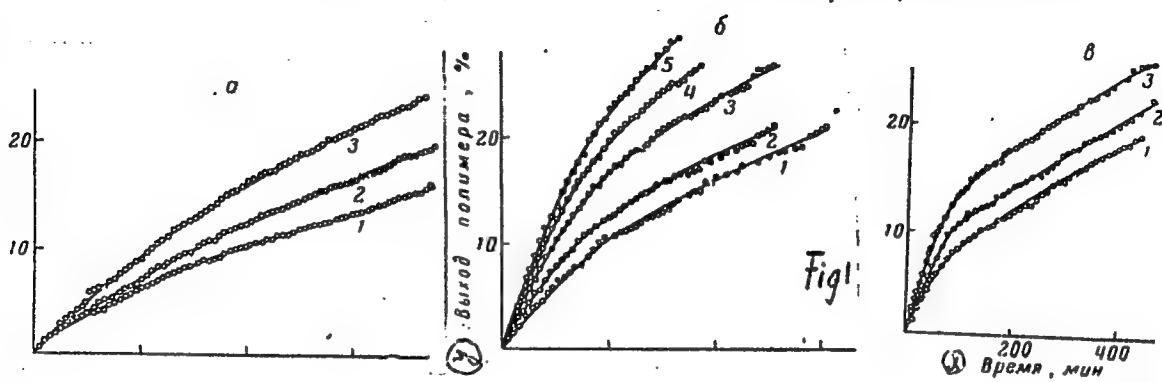
Polymerization with water (in which the peroxide is also insoluble) predominantly took place in the aqueous phase under formation of a latex. T. A. Martynenko took part in the experiments. There are 2 figures, 2 tables, and 6 references: 2 Soviet-bloc and 4 non-Soviet-bloc. The 2 references to English-language publications are given in the text of the abstract.

ASSOCIATION: L'vovskiy gosudarstvennyy universitet im. Ivana Franko
(L'vov State University imeni Ivan Franko)

SUBMITTED: July 5, 1960

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The kinetics of styrene...

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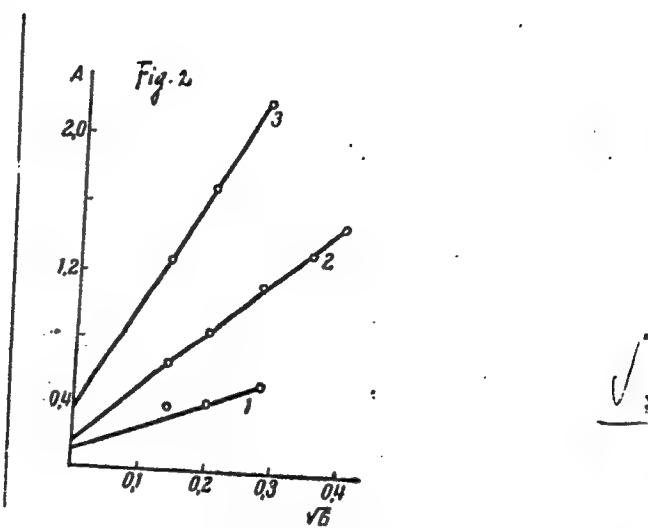
Legend to Fig. 1: a) 75°C ; b) 85°C ; c) 95°C ; x) time, hr;
 y) polymer yield; content in phthaloyl peroxide, %: 1) 0.2; 2) 0.4;
 3) 0.8; 4) 1.2; 5) 1.6.

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Legend to Fig. 2: A) Polymer yield,
%/min; B) phthaloyl peroxide
concentration.



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B101/B204Таблица 2
Зависимость характеристической вязкости полистирола от концентрации перекиси фталоила

(4) Концентрация инициатора в реакционной смеси, %	(2) Температура помещения, °C	(3) Глубина полимери- зации, %	(4) Характери- стическая вязкость по- листирола	(1) Концентрация инициатора в реакционной смеси, %	(2) Температура помещения, °C	(3) Глубина полимери- зации, %	(4) Характери- стическая вязкость по- листирола
0,2	75	16,1	1,70	1,2	85	26,8	0,96
0,4	75	19,8	1,28	1,6	85	29,3	1,00
0,8	75	24,4	0,92	0,2	95	19,4	1,40
0,2	85	21,2	1,58	0,4	95	23,0	1,32
0,4	85	21,2	1,31	0,8	95	26,8	1,14
0,8	85	26,9	1,10				

Legend to Table 2: 1) Initiator concentration; 2) temperature of polymerization; 3) intensity of polymerization; 4) intrinsic viscosity.

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TSVETKOV, N.S.; ZARECHNYUK, O.S.

Coppering aluminum by contact reduction. Zhur.prikl.khim.
33 no.3:636-644 Mr '60. (MIRA 13:6)

1. Ukrainskiy poligraficheskiy institut imeni Ivana Fedorova.
(Copper plating) (Aluminum)

5.2200, 5.2100, 18.7400

78222
SOV/80-33-3-23/47

AUTHORS: Tsvetkov, N. S., Zarechnyuk, O. S.

TITLE: Copperizing of Aluminum with Contact Reduction

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 3,
pp 636-644 (USSR)

ABSTRACT: This study was suggested by N. V. Slavinskiy of the
Ivan Fedorov Ukrainian Polygraphic Institute and is
part of the work on the technological development
of the production of bimetallic offset printing plates
copperized with ethanol solutions of copper salts. AD1N
aluminum sheets and cupric chloride were used in the
experiments. The amount of copper reduced on the
aluminum surface increased linearly with the water content
of the solution. The thickness of the copper deposit
grew with increasing $CuCl_2$ concentration to a maximum
and then decreased gradually. This maximum was most
pronounced with solutions of higher water content (4.5%).
The above phenomenon can be explained by the two-stage

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Copperizing of Aluminum with Contact Reduction

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reduction of bivalent copper which proceeds as follows:



Hence, at higher concentrations of bivalent copper ions (high CuCl_2 concentration, presence of water)

the latter are reduced predominantly to univalent ions, and the amount of copper reduced to metal decreases. An increased, and then decreased, reaction rate was observed at the beginning of the process. This was due to two counteracting reactions: (1) the dissolution of the passive oxide film on the aluminum surface, and (2) the sharp decrease in the oxidizing activity of the solution due to the growing concentration of aluminum ions. After this initial period, the rate of reduction remained practically constant and was not influenced by the thickness of the copper deposit. The rate of reduction in the range of 0-30° C increased slowly; a sharp increase of the reaction rate occurred above

30° C. The uniformity and the strength of the deposit

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Copperizing of Aluminum with Contact
Reduction

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depended on the finish of the aluminum surface and was highest on smooth surfaces. There are 6 figures; and 20 references, 2 U.S., 3 U.K., 1 German, 1 East German, 13 Soviet. The U.S. and U.K. references are: L. D. Goddeyne, G. Dennis, Light Metals, 56 (Feb., 1955); Modern Lithographer a. Offset Printer, 52, 28 (1956); J. Iorgencan, The American Pressman, 12, 14 (1956); The British Printer 44 (June, 1956).

ASSOCIATION: Ivan Fedorov Ukrainian Polygraphic Institute (Ukrainskiy poligraficheskiy institut imeni Ivana Fedorova)

SUBMITTED: March 3, 1959

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GRITSAN, D.N.; TSVETKOV, N.S.

Conditions of simultaneous electroplating of manganese and chromium.
Nauk. zap. L'viv. un. 13:77-82 '49. (MIRA 12:10)

1. Kafedra fizicheskoy i kolloidnoy khimii L'vovskogo gosudarstvennogo
universiteta imeni I. Franko.
(Electroplating)

134470-1, M.V.

MASLYAKOV, Vasiliy Nikolayevich; TSVETKOV, N.V., retsenzent [deceased];
SHARAPOV, N.I., retsenzent; PAVLOV, V.F., red.; DOBRONRAVOVA, S.M.,
red.izd-va; SALAZKOV, N.P., tekhn.red.

[Manual for workers receiving and delivering rafts in lumber floating]
Posobie priemosdatchiku plotov na rechnom transporte. Moskva, Izd-vo
"Rechnoi transport," 1957. 165 p. (MIRA 11:3)
(Lumber--Transportation)